Release Notes

N08 Firmware for the USB 2.0 Ranger®/RG23XX Family of Extender Systems

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Contents

1.   Firmware Release Notes

The following notes are applicable to the N08 (1.7.3) firmware release associated with Icron's ExtremeUSB® based USB 2.0 Ranger®/RG23XX Core Series of USB 2.0 Extenders. The new USB 2.0 RG2300A/2310A Core Series are shipped with the N08 firmware.

NOTE: N08 is backwards compatible with N-Stream firmware releases N07, N06, N05.

IMPORTANT: Complete systems (LEX = Local Extender and REX = Remote Extenders) should always be upgraded to the most recent firmware version. In order to provide support, Icron Technical Support will require both LEX and REX be on the same firmware, and the most recent firmware.

1.1   Included Features and Fixes

The N08 firmware release is built on top of the advancements made in the N07 firmware release, and includes the following new features:
- Additional Device Class Filtering (DCF) feature option to block all devices except HID, Hub and Smart Card Reader
- RGMII Ethernet PHYs will auto-negotiate to 1 Gbps or 100 Mbps compared to just 1Gbps (Note: applies only to Core 2300 Series)

N08 firmware also contains the following fixes:
- Resolved rare potential REX lock-up during disconnection of USB 1.1 devices and disconnection/connection of a removable root device
- Core module LEX will recognize link cable disconnection when isochronous (ISO) devices are connected to the REX
- Addressed situation in the DHCP client where retries were not handled correctly
- Resolved issue where DCF will not block device if the device had previously been plugged in before DCF was enabled
- Mass Storage Acceleration stability improved
- Improved interoperability between LEX and REX with different configuration values
- Resolved suspend issue where USB disconnect from a LEX caused internal states of the LEX and REX to become out of sync, resulting in unresponsive devices
- Improved Simultaneous User Interaction feature performance:
    - LEX and REX pairing no longer require REX power cycle to establish link
    - Full compatibility with OS X
    - REX can be paired to a new MAC address without first clearing old address
    - LEX and REX host LEDs stay in sync after disconnecting the LEX from the host

1.2   Identified Firmware Issues

No new firmware issues have been identified as a result of this firmware release.

1.3   Date of Effect

It is estimated this firmware change will occur in some shipments from Icron beginning February 2016. The actual shipping date will depend on sell-through rates of individual impacted SKUs. Please contact your account manager for more details.

1.4   Upgrade Notes

The process to upgrade firmware to N08 requires a Windows computer running Icron's ExpressLink™ software application. The computer is connected by a special programming cable to the extender. The upgrade process takes approximately 3 minutes for each of the LEX and REX units, totaling approximately 6 minutes per complete system.

Please contact Icron Technologies Technical Support at http://icron.com/support to determine how best to proceed on upgrading your ExtremeUSB based extenders.

Please note: all configurations should be tested prior to any production installation or upgrade roll-out.

2.   Impacted Products

Supported Icron product part numbers include, but are not limited to the following ExtremeUSB extenders:

Extender Model	Part Numbers
USB 2.0 Ranger 2304	00-00347, 00-00348, 00-00349, 00-00350, 00-00373
USB 2.0 Ranger 2304-LAN	00-00335, 00-00336, 00-00337, 00-00338, 00-00372
USB 2.0 Ranger 2304GE-LAN	00-00376, 00-00377, 00-00378, 00-00379, 00-00380
USB 2.0 RG2304	01-00448, 01-00449, 01-00450, 01-00451, 01-00537
USB 2.0 RG2304-LAN	01-00397, 01-00398, 01-00399, 01-00400, 0100538
USB 2.0 RG2304GE-LAN	01-00453, 01-00454, 01-00455,01-00456, 00-00529
USB 2.0 RG2300 Core Modules	02-00042, 02-00043
USB 2.0 RG2310 Core Modules	02-00044, 02-00046
USB 2.0 RG2300A Core Modules	02-00074, 02-00075
USB 2.0 RG2310A Core Modules	02-00076, 02-00077

The above is not an exhaustive list of impacted extension products. Please review your own ExtremeUSB based extender models, or consult with your account manager to determine if this release applies to you.

3.   Definitions

Device Cycle – Unplug and plug back in, or turn OFF and turn back ON a USB device.

DHCP - Dynamic Host Configuration Protocol is a client/server protocol that automatically provides an Internet Protocol (IP) host with its IP address and other related configuration information such as the subnet mask and default gateway.

HID – Human Interface Device such as mouse, keyboard.

LEX – Local Extender module, which is the module that is connected to the host computer.

Link Cycle – Unplug and plug back in the link between the Local and Remote Extenders. This is typically the CAT X cable or Fiber cable between the units.

Local Extender Cycle – Unplug the Local Extender unit from the host computer, and plug it back in.

Power Cycle – Power OFF a unit and powering it back ON. A power cycle may apply to an extender module, USB device, or a host computer.

Remote Extender Cycle – Unplug the Remote Extender from the power source, and plug it back in. One some systems this may be the same as a Link Cycle.

REX – Remote Extender module, which is the module that is connected to the USB device(s).

Suspend Cycle – Allowing a host computer to suspend the USB bus, ports, and then forcing the host computer to bring the USB bus or ports out of the suspend state.

USB – Universal Serial Bus, a communication standard between devices and computers.

UTP – Unshielded Twisted Pair consists of two unshielded cable twisted to each other and is commonly used in Local Area Network.

4.   Notes

As a result of transmission delays, and other aspects inherent to USB extension, some device and host controller combination may not work as expected in certain situations, such as during power cycles, or when bandwidth requirements increase.

If you have concerns, questions or comments about specific devices, controllers, operating systems or these release notes, please contact Icron Technologies Technical Support at http://icron.com/support in advance so we are better able to assist you.

4.1   Related documents

Previous N-stream firmware release notes are available in the following documents:

90-01119-A01	N04 Firmware Release Notes	April 2013
90-01242-A01	N05 Firmware For Ranger/RG2304 Family of USB 2.0 Extenders Systems	May 2014
90-01276-A01	N06 Firmware For RG2300 Core Series of USB 2.0 Extenders Systems	May 2014
90-01283-A01	N07 Firmware for the USB 2.0 Ranger/RG2300 Family of Extender Systems	Oct 2014